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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/967,136	09/27/2001	Richard Joseph McConnell	ST00025USU (123-US-U1)	4922
27498	7590	01/29/2010		
PILLSBURY WINTHROP SHAW PITTMAN LLP				
P.O. BOX 10500				
MCLEAN, VA 22102				
EXAMINER				
BURD, KEVIN MICHAEL				
ART UNIT		PAPER NUMBER		
2611				
NOTIFICATION DATE		DELIVERY MODE		
01/29/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket\_ip@pillsburylaw.com

# Office Action Summary

**Application No.**

09/967,136

**Applicant(s)**

MCCONNELL, RICHARD JOSEPH

**Examiner**

Kevin M. Burd

**Art Unit**

2611

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-6, 8 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6, 8 and 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/C.3)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

1. This office action, in response to the amendment and request for continued examination filed 1/21/2010, is a non-final office action.

***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/21/2010 has been entered.

***Drawings***

3. The drawings were received on 1/21/2010. These drawings are acceptable.

***Response to Arguments***

4. Applicant's arguments filed 1/21/2010 have been fully considered but they are not persuasive.

Applicant states the prior art does not disclose a table of partial accumulations that is stored and used during a correlation process. The examiner disagrees. As stated in the advisory action mailed 1/5/2010, the digital components of the circuits are shown in figure 2 (of Kuo) and the codes are stored in these components. The table is a

memory location or memory locations where data values are stored for later use. This is what Kuo discloses. The codes are stored in these components for later use.

Applicant states the examiner's interpretation of the partial accumulations is incorrect. The examiner disagrees. As stated in the previous final office action, Kuo discloses determining codes that are repeated in the correlation process. Some of the codes are redundant code sequences that are repeated during the correlation process. A portion of these codes are removed and the remaining codes are correlated with the pseudo random codes that are received in the spread data signal. These codes are the partial accumulations in that they are repeated in a correlation process of the spread spectrum signal, at least a portion of the codes that are repeated in the correlation process are removed and the remaining codes are used to correlate the received signal. The remaining codes are stored for use in the correlation of the received spread data signal.

Applicant states the limitations of claim 18-20 are not taught by the prior art. However, the prior art discloses the received spread data signal is correlated with the stored correlation codes as stated in the previous rejection of claim 18. The prior art discloses a portion of the codes are removed in the process. The non-redundant codes are combined to form the corrected despreading code used to correlate the received spread data signal in the receiver. Therefore, the receiver combines the codes but does not add the codes to produce an output value. The previous rejection of claim 19 is withdrawn.

5. A new rejection of the claims under 35 USC 101 is stated below.

6. A new rejection under 35 USC 112, second paragraph is stated below.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1, 3-6, 8 and 17-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The pending claims recite a process. It is unclear where the process recited is being tied to another statutory class such as a particular apparatus where the use of the machine involves more than insignificant extra-solution activity or where the process discloses transforming the underlying subject matter to a different state or thing. Though the claims recite a GPS receiver that is capable of accessing stored information and a GPS receiver using received data, it is unclear where the claims recite a particular apparatus where the use of the machine involves more than insignificant extra-solution activity are required. Appropriate clarification or correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites the limitation "the accumulator output value" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. It is believed claim 20 should depend on claim 19.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3-6, 8, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al (US 6,370,208) in view of Lundby et al (US 6,285,655) further in view of Underbrink (US 6,650,879).

Regarding claims 1, 3-5 and 18, Kuo discloses a correlator for CDMA applications. An incoming spread spectrum signal is received. In spread spectrum receivers, to despread the spread signal, the received signal is correlated with the appropriate spreading code (PN code) to recover the originally transmitted data. Kuo discloses determining for the spread spectrum signals, codes that are repeated in the correlation process (column 4, lines 21-26). These codes are the partial accumulations. The codes are the same as those codes used to spread the transmitted signal.

Therefore, the spread signal is used to determine these codes. A portion of the codes are removed in this process. Column 4, lines 30-34 states, for example, the first and third positions have the pattern 1, 1, -1, 1. Combining the corresponding portions of the received signal together before multiplying reduces the number of multiplications. The non-redundant portions and the redundant portions are stored then used to correlate the received signal to despread the received data signals in the receiver. Claim 1 of the reference also provides a description of the process of despreading the received signals with a reduced number of calculations. Though Kuo discloses correlating the I and Q signals, Kuo does not explicitly show the I and Q signals are accumulated separately. Lundby discloses the CDMA receiver shown in figure 4. The receiver separates the received signal into I and Q components. The I and Q signals are separately correlated using a short PNI sequence and a short PNQ sequence (column 7, lines 51-57). The despread I and Q signals are separately input to accumulators 324a and 324b, as shown in figure 4, to accumulate the data over the 64-chip interval (column 7, lines 58-66). Using the prior art components of a CDMA receiver will allow for proper reception and recovery of the transmitted signals in the communication system. In addition, when a received signal is separated into its I and Q components, separate I and Q correlation takes place to despread the signal. The despread components are then combined. This is what is done in CDMA receivers. For these reasons, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the typical components of a CDMA receiver as shown by Lundby into the CDMA receiver of Kuo.

The combination of Kuo and Lundby does not disclose the receiver is a GPS receiver. Underbrink discloses the personal communication device with GPS receiver shown in figure 3. The GPS receiver comprises a GPS receiver as well as a CDMA transceiver. The GPS receiver of Underbrink allows numerous types of signals to be received. The provisions share a common clock source (column 2, lines 19-30). This minimizes the physical size of the on-board battery (column 1, lines 14-28) as well as the inherent advantageous of GPS. For these reasons, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Underbrink into the method of Kuo and Lundby.

Regarding claim 6, Kuo discloses the redundant calculations are determined and removed from the calculations. The non-redundant calculations will be computed using the correlation process.

Regarding claim 8, Kuo discloses the use of I/Q spreading in the RAKE receiver (column 2, lines 34-43).

Regarding claim 17, Kuo discloses the received signal will comprise a number of code bits and corresponding data bits. Column 3, line 63 to column 4, line 4 discloses the data comprises numerous 4 bit code words. The spread data will comprise at least that number of data bits.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M. Burd/  
Primary Examiner, Art Unit 2611  
1/26/2010